

ABSTRACT OF THE DISCLOSURE

The present invention is a method for purifying an enzyme, particularly an acylase, comprising causing selective aggregation and precipitation of a contaminant enzyme, particularly deacetylase, by the use of a surfactant, particularly a cationic surfactant. The present invention is also a method for regenerating an immobilized enzyme carrier, particularly a synthetic adsorbent or ion exchange resin, comprising allowing a protease to act on the immobilized enzyme to remove the enzyme from the carrier, said immobilized enzyme being prepared by binding the enzyme with the carrier and optionally crosslinking the enzymes by the use of a crosslinking agent after binding. Particularly, the present invention is the above-mentioned carrier regeneration method, wherein the carrier has fine pores, and the above-mentioned carrier regeneration method, wherein the enzyme is cephalosporin C acylase.

According to the enzyme purification method of the present invention, undesirable contaminant enzyme for the objective enzyme, which cannot be removed by a conventional purification method, can be selectively separated and removed. Therefore, the inventive method is useful for the production of a standard enzyme product having a higher purity. In addition, the method for regenerating an immobilized enzyme carrier of the present invention based on degradation of the enzyme by a protease can remove the enzyme from the carrier, particularly a carrier having fine pores, extremely efficiently, so that repeated recycled use of the carrier is realized, which is beneficial in terms of environmental and economical aspects.